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INTRODUCTION.

Cotton was extensively grown in the West Indies in the 18th century, when it was one of the staple crops of the early colonists. It has never been grown to any great extent in Trinidad, however, the climate on the whole being too moist for its successful cultivation, and insect pests and diseases would take too great a toll. No cotton is grown commercially on the island at the present time, though the Research Station of the Empire Cotton Growing Corporation is situated in Trinidad for a study of the genetics and physiology of the plant.

Sea Island cotton, though not indigenous to the West Indies, has been the chief type grown for the last thirty years, and since the destruction of the American Sea Island cotton industry by the boll-weevil, the West Indies have been practically the only source of supply of this long-staple cotton (1).

Sea Island cotton, owing to its fineness and great length of staple, was used extensively for the manufacture of lace and the finest type of cotton fabrics. In recent years, however, following on the trade depression, the demand for this class of goods has fallen off, with the result that there is now very little sale for this type of cotton, and many hundreds of bales of Sea Island cotton from past seasons' crops are lying unsold either in Liverpool or on the West Indies.

Unfortunately, such long staple cottons as are grown in St. Vincent, for instance, cannot be spun on the ordinary type of machinery used in most Lancashire mills, so that even if the cotton was offered at a lower price it could not be sold.

In St. Vincent, Dr. Harland and Mr. Evelyn are working to produce a strain of cotton, by crossing Sea Island with shorter stapled cottons, which will be a better yielder than the variety at present grown, and which will compete on the market with the best types of Sakel cotton, for which there is a comparatively ready sale.

No cotton is grown commercially in Trinidad at the

present time, but the aims and objects of the researches carried out at the Imperial College are not confined solely to problems occurring within the boundaries of this island, so that the trying out of new varieties and the regular growth of progeny rows and pure line plots may prove at some future time to have been of material value to the West Indies, in addition to their obvious value as demonstration plots for students.

As regards acreage, yield, and length of staple, Cambodia is the most important cotton grown in Madras. In India it is frequently grown under irrigation, under which conditions it has a staple of $3\frac{3}{8}'' - 1\frac{1}{8}''$, while without irrigation its staple is $5\frac{5}{8}'' - 7\frac{7}{8}''$. Its average ginning percent is 33. In its original home in Indo-China it is grown along the river banks on light soils, inundated and fertilized by the Mekong River. Cambodia is known to suffer severely from rain after germination (1).

PRELIMINARY WORK.

(a) Green House Germination Test.

One pound of Cambodia C 62 cotton was received from Madras, S. India, on October 6th. The first thing done after the arrival of the seed was to test its germination under greenhouse conditions, to see that the viability of the seeds had not been damaged during the long journey. Three boxes were obtained and filled with sand, in which seeds were sown, after treatment with sulphuric acid in the manner described below.

In boxes I. and III. 50 seeds were sown, but in box II. only 48 were sown.